

REMARKS

Claims 2, 5-11, 14-18, 21, 23-26, and 29-44 are pending in this application. Applicants appreciate the Examiner's careful consideration of this application and allowing of claims 2, 5, 9, 21, 38, 39, and 43.

Claims 6-8, 10-11, 16-18, 30-32, 35, and 40-42 were rejected under 35 U.S.C. § 112, first paragraph, because the specification allegedly does not provide support for the amended claims. The Applicants respectfully traverse this rejection because the claims have full support in the specification as originally filed.

Additionally, claims 14-15, 23-26, 29-37, 40-42 and 44 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter set forth therein. Each of the formalities identified in the Office Action have been addressed in this Amendment, and Applicants accordingly request the Examiner to reconsider and withdraw this rejection.

Applicants previously amended claims 6-8, 11, and 16 to depend from allowed generic claim 5, and amended claims 30-32, 35, and 40 to depend from allowed generic claim 29. Claims 17 and 18 depend from claim 16. On the other hand, claims 41 and 42 depend from claim 40. Applicants therefore submit that the issue of whether these claims are drawn to a non-elected species is moot, as these claims are allowable by virtue of their dependency on allowed claims.

Regarding the rejection of claims 6-8, 10-11, 16-18, 30-32, 35, and 40-42 under 35 U.S.C. § 112, first paragraph, the Examiner has the burden to show the claims are

not supported by the disclosure. As stated in MPEP § 2163.04, the inquiry into whether the description requirement is met must be determined on a case-by-case basis and is a question of fact. In re Wertheim, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). The examiner has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. 541 F.2d at 265, 191 USPQ at 98. See also Ex parte Sorenson, 3 USPQ2d 1462, 1463 (Bd. Pat. App. & Inter. 1987). Applicants respectfully contend that the Examiner has failed to meet this burden because no evidence or reasons why persons skilled in the art would not recognize in the Applicants' disclosure a description of the invention defined by the claims has been presented. Additionally, the originally filed disclosure does in fact meet the requirements of 35 U.S.C. § 112, first paragraph, for at least the reasons discussed below.

As stated in MPEP § 2163.02, the fundamental factual inquiry is whether a claim defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed. The subject matter of the claim need not be described literally (i.e., using the same terms or in haec verba) in order for the disclosure to satisfy the description requirement.

Further, regarding claims 6-8, 10-11, and 16-18, MPEP § 2163.02, states original claims constitute their own description. In re Koller, 613 F.2d 819, 204 USPQ 702 (CCPA 1980). Still further, as noted in MPEP § 2163.06, information contained in any one of the specification, claims or drawings of the application as filed may be added to

any other part of the application without introducing new matter. Therefore, the subject matter of each of these claims is described literally and defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed.

Although some of the dependencies have been changed, the features of these dependent claims have not been changed. The Examiner appears to view a change in dependency as unsupported by the original disclosure. The Applicants respectfully disagree. For example, claims 6 and 7 as filed depended from claim 3 and claim 5 depended from claim 4, which depended from claim 3. Claim 3 depended from claim 1. Claim 5 was rewritten in independent form to include the features of claims 1, 3 and 4. Finally, claims 6 and 7 were amended to depend from claim 5. Therefore, it appears that the Examiner suggests that including the features of claim 6 (i.e., circular elements) and claim 7 (i.e., planar elements) to claim 5 is not supported by the original disclosure.

However, this is contradicted by the plain language of the claims themselves as originally presented. Specifically, the stationary and movable elements that claims 6 and 7 further define were present in claim 3 as filed. The Examiner apparently contends that one of ordinary skill in the art would not be able to recognize that the elements of claim 3 can be modified when combined with the features of claim 5. However, claim 5 does nothing to limit or oppose such modification to the elements. In fact, the features of claim 5 are not directed to the shape of the elements but are directed to the suspension of the arrays.

Further, since there is no definition of the shape of the elements in claim 5, there is no contradiction or prohibition to further defining the elements in a particular geometric shape. Specifically, the original claims taught that the stationary and movable elements could be circular or planar. Therefore, if not explicitly taught, it would at least be obvious to one of ordinary skill in the art to make the stationary and movable elements in claim 5 either circular or planar.

Still further, regarding the features of claims 6-7, additional explicit support and description of the subject matter of these claims is found at least on page 6, lines 1-2 of the present Application, which states stationary and movable elements of the vertical comb drive "may be circular or planar". Once again, since there is no prohibition as to the application of these shapes, the Examiner should not arbitrarily limit the teachings of the specification or claims.

The remaining originally filed claims 8, 10-11, and 16-18 are supported by the original disclosure for reasons similar to those given above.

Similarly, the features of dependent claims 30-32, 35, and 40-42, mirror the features of original claims 6-8, 11, and 16-18, respectively. Therefore, the subject matter of each of claims 30-32, 35, and 40-42 is described literally and defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed for reasons similar to those given above.

For the above stated reasons, reconsideration and withdrawal of the rejection of claims 6-8, 10-11, 16-18, 30-32, 35, and 40-42 under 35 U.S.C. § 112, first paragraph are earnestly solicited.

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance and such allowance is respectfully solicited. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mark E. Olds (Reg. No. 46,507) at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made.



Appl. No. 09/049,121
Attorney's Docket No. 2119-0107P

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

The claims have been amended as follows:

14. (Thrice Amended) A deformable mirror comprising:

a vertical electrostatic comb drive including an array of vertical comb actuators, wherein said vertical comb drive includes a first array of stationary elements and a second array of moving elements correspondingly interspersed with said first array;

a reflective surface attached to said vertical comb drive, said reflective surface being attached to said second array and defining a plane, said reflective surface being displaced in a direction orthogonal to the plane thereof when said vertical comb drive is actuated; and

springs for individually suspending each of said second array of each actuator in said array.

29. (Twice Amended) A displaceable surface comprising:

a vertical electrostatic comb drive;

a surface attached to said vertical comb drive, wherein said vertical comb drive comprises a first array of stationary elements and a second array of moving elements correspondingly interspersed with said first array, said surface defining a plane and being attached to said second array, said surface being displaced in a direction orthogonal to the plane thereof when said vertical electrostatic comb drive is actuated;

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a layer covering tops of elements of said second array; and
a spring for suspending said first array relative to said second array, said spring being attached to said layer.

33. (Four Times Amended) A displaceable surface comprising:

a vertical electrostatic comb drive;
a surface attached to said vertical comb drive, wherein said vertical comb drive comprises a first array of stationary elements and a second array of moving elements correspondingly interspersed with said first array, said surface defining a plane and being attached to said second array, said surface being displaced in a direction orthogonal to the plane thereof when said vertical electrostatic comb drive is actuated;
a layer covering tops of elements of said second array; and
a post attaching said layer to said [reflective] surface.